



PRESS KIT

# MOBULA 8.2

---

BY THE SEACLEANERS &  
EFINOR SEA CLEANER



A FIRST BOAT IN MALAYSIA.....	3
1. PRESENTATION OF MOBULA 8.2 .....	4
2. WHY TAKE ACTION IN RIVERS?.....	4
3. HOW DOES THE MOBULA 8.2 MEET THESE REQUIREMENTS?.....	5
- The advantages of Mobula 8.2	
- Reduced environmental impact	
- Successful, patented EFINOR Sea Cleaner technologies	
4. CAPTION ON MALAYSIA: WHERE COULD MOBULA 8.2 BE DEPLOYED?.....	7
5. WHAT DO WE DO WITH THE WASTE WE COLLECT?.....	7
- The contribution of our Mobula boats to the circular economy	
- How does it work?	
- An economic and social dynamic	
6. THE SEACLEANERS IN INDONESIA: FEEDBACK.....	9
- National action plan to combat marine plastic waste	
- Scientific activities	
- Action at sea and an eye in space	
- Education and awareness activities	
- Improving waste management	
7. THE SEACLEANERS' PARTNERS IN INDIA AND THE MOBULA OPERATION.....	10
- The Mobula 8 - the first born of a fruitful alliance between The Seacleaners and EFINOR Sea Cleaner	
- Other contributors	
- Note to editors	
- Press contacts	



The Mobula 8.2 in Paimpol, France

# A FIRST BOAT IN MALAYSIA

Since 2016, The SeaCleaners has been fighting on all fronts, without hesitation or prevarication, to combat marine plastic pollution.

So here we are, soon to be in Malaysia! We're proud and honoured that the Mobula 8.2 is destined for Malaysia.

Since March 2023, The SeaCleaners has been in Bali, Indonesia, with its first Mobula 8, cleaning up coastal areas. We've had a visible impact there, working alongside all the players mobilised locally to help bring about a lasting change in behaviour and reduce waste at source.

We are working tirelessly to make our association a complete and versatile player in ocean pollution clean-up. We've come an impressive 8 years. The road ahead is even more impressive.



The Mobula 8 in Bali, Indonesia

# 1. INTRODUCING MOBULA 8.2

- The Mobula 8.2 is a multi-purpose clean-up boat offered by The SeaCleaners, in partnership with EFINOR Sea Cleaner.

- What makes it special? It can collect **floating macro-waste, micro-waste\*** and **liquid waste** (hydrocarbons, oils, etc.) to combat the most widespread forms of pollution.

- A **truly autonomous waste recovery station**, the Mobula 8.2 is a concentrate of unique solutions for recovering solid and liquid waste and cleaning up contaminated areas.

- It is designed for **clean-up operations** in calm, protected waters such as coastal areas, lake areas, mangroves, rivers, canals and at sea up to 6 miles off the coast.

\* recovery of micro-waste for scientific studies



The Mobula 8.2

## 2. WHY ACT IN RIVERS?

Studies on ocean plastic pollution show that rivers are one of the main sources through which terrestrial plastic enters the oceans. The exact amount of river plastic waste remains unknown, but it is estimated to be between 1.15 and 2.45 million tonnes per year (1).



The transport of plastics through rivers is largely influenced by local conditions (environmental and structural).

Moreover, in rivers, waste is concentrated and easily collected. Less degraded by seawater and UV rays than marine waste, they are more easily recoverable, whether in material recovery or energy recovery.

With the Mobula 8.2, The SeaCleaners acts upstream by collecting waste in rivers, estuaries and near ports. The latter are strategic areas of intervention because different waste streams are located nearby, namely waste from rivers, marine transport waste and land waste from surrounding towns and villages.

(1) Laurent Lebreton et al. *River plastic emissions to the world's oceans*. 2017.

### 3. HOW DOES MOBULA 8.2 RESPOND TO THESE CHALLENGES?

- Simultaneous recovery of **macrowaste, micro-waste\*** and **liquid waste** (oils, hydrocarbons...)
- Ability to clean **15,000 m<sup>2</sup> per hour**
- Collection of floating solid and liquid waste up to **0.4 m depth**
- Collection span **4 m wide**, with front mounted concentrator arms
- Micro-waste collected from **30 microns to 2 mm**
- Suction **2.5 to 4 m** upstream of the vessel
- Solid waste storage capacity **5 to 8 m<sup>3</sup>** (2400 kg) in bigbags
- Liquid waste storage capacity: **600 litres**
- Hazardous waste stored in dedicated bins
- Larger basket capacity and even more functional deck ergonomics than the Mobula 8



\* micro-waste recovery for scientific studies

#### THE ADVANTAGES OF MOBULA 8.2

Designed for recovery operations even in the most inaccessible places

Operable with a limited crew of 3 people (1 pilot and 1 or 2 operators)

transportable by container truck for a drastic reduction in costs and a rapid deployment

Speed of intervention: switch from navigation mode to decontamination mode in less than 3 minutes

Platform widened by inflatable flanges to increase the stability of the boat

#### REDUCED ENVIRONMENTAL IMPACT

- Mobula 8.2's structure is made of aluminum, a durable and durable material that is recyclable for life
- This boat is light and travels little, reducing fuel consumption
- A life cycle analysis of the boat, carried out by **Capgemini Engineering** (formerly Altran), showed that the Mobula 8.2 represents an environmentally efficient solution, that is to say that the environmental impacts related to the construction of the boat, the extraction of raw materials, its propulsion, its consumption in collection, its maintenance, the recovery of waste collected, are lower than the environmental benefits generated.

**The EcoPlex project:** allowing architects of complex systems to quickly and regularly assess the environmental impact of their design choices, this was the objective of the Ecoplex project led by Manta Innovation, the former integrated engineering office of The SeaCleaners. Our teams have therefore developed a procedure and software for eco-designing complex systems applied to the naval domain. The case studies of the Mobula 8 and the Mobula 10, another boat in our fleet, were used to develop this tool called Ecoplex.

To carry out this mission, The SeaCleaners has surrounded itself with various partners: Obeo, Capgemini Engineering, Stirling Design International, LS2N, EFINOR Sea Cleaner, and was helped by a grant from the Brittany Region.

This mission made it possible to carry out the Life Cycle Analysis (LCA) studies of all our Mobula boats. These results have been taken into account in the development of the new boats with EFINOR Sea Cleaner.

## SUCCESSFUL, PATENTED EFINOR SEA CLEANER TECHNOLOGIES :

Efficiency proven by OHMSETT and CEDRE tests

Project accredited by the Brittany Atlantic Maritime Cluster

Bureau Veritas certification for structure and stability

Approved by French Maritime Affairs



The Mobula 8.2

<b>Engine</b>	90	hp outboard
<b>Maximum speed</b>	7	knots
<b>Cleaning speed</b>	0 - 2	knots
<b>Hull length</b>	9.20	m
<b>Hull width</b>	3.80	m
<b>Lightship weight (with floats)</b>	2,400	kg
<b>Mean draught</b>	0.80	m

### DETAILS

The vessel is fitted with a net for collecting micro-waste, particularly microplastics, for scientific studies. Different mesh sizes can be used depending on the morphology of the waste encountered, from 500 to 2,000 µm.

## 4. HEADING FOR MALAYSIA: WHERE COULD MOBULA 8.2 BE DEPLOYED?

### Destination Malaysia for this second Mobula 8!

The **SeaCleaners Operations Centre** has identified potential sites for action in calm waters, where clean-up operations will be carried out in partnership with associations, businesses and local authorities.

In addition to its pollution clean-up mission, Mobula 8.2 will also be tasked with preparing future collection campaigns for MANTA\*, The SeaCleaners' flagship project. The aim is to locate, qualify, quantify and identify the densest and sometimes most inaccessible areas of pollution likely to be used for MANTA's marine plastic waste collection campaigns.

\* see p.13 for more information on MANTA



## 5. WHAT DO WE DO WITH THE WASTE WE COLLECT?

### THE MOBULA - BOATS BORN OF A FRUITFUL ALLIANCE BETWEEN THE SEACLEANERS AND EFINOR SEA CLEANER

Thanks to our partner Cap Gemini Engineering (ex. Altran), two parametric analysis models were carried out to determine the economic and environmental impact of various solutions for decontaminating and recycling waste designed by The SeaCleaners.

These studies showed that our Mobula, by contributing to the implementation of circular economy loops on the ground, was an economically viable solution with a lower environmental impact.

The Mobula 8

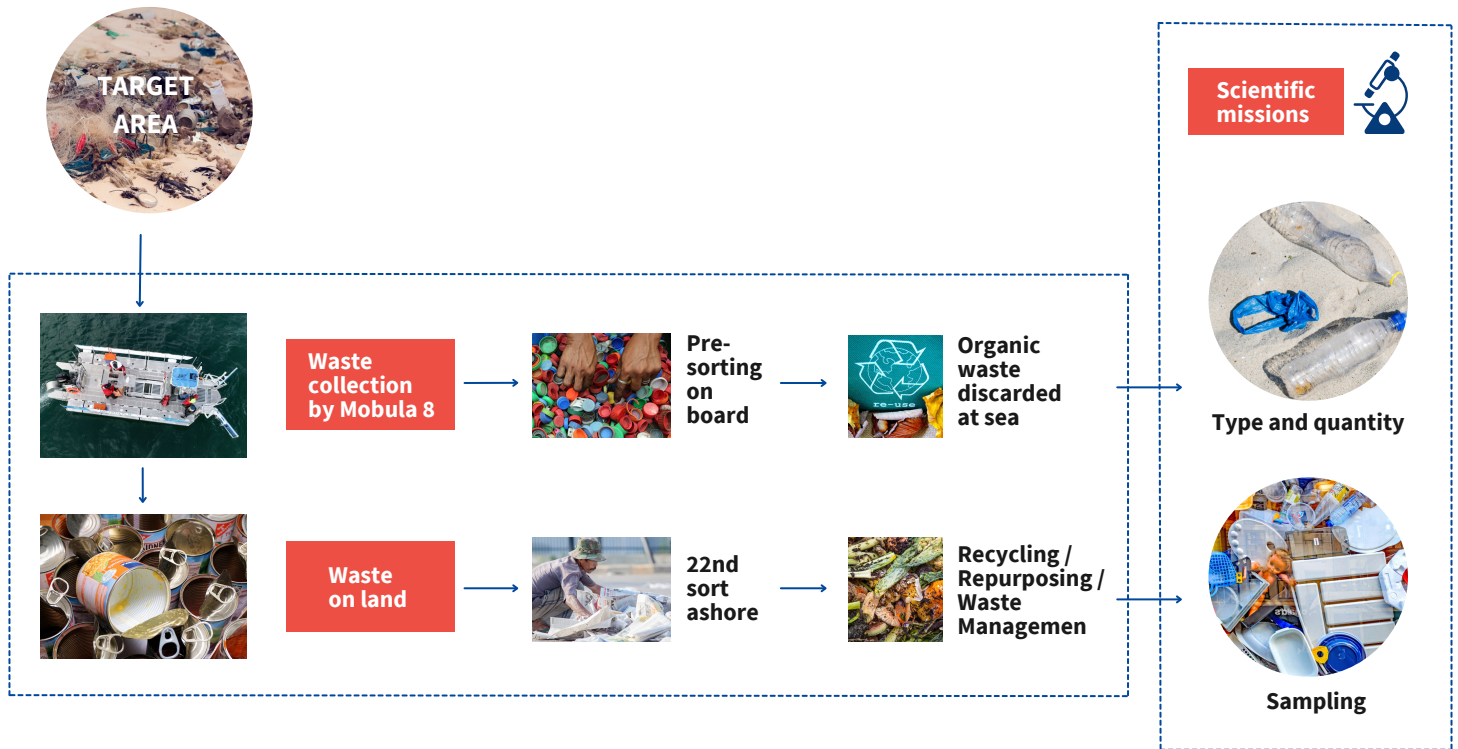


## HOW DOES IT WORK?

The waste collected by the Mobula 8.2 from rivers, canals and estuaries will first be sent to sorting centres where waste from different streams is also processed: land-based waste (collected by lorries from towns and villages near the port) and shipping waste.

The sorting unit will separate plastic and non-plastic waste.

The former will either be transformed into energy, using low-tech energy recovery units, or recycled; while the latter will be entrusted to appropriate recycling facilities. The elimination of marine waste goes hand in hand with data collection.



## AN ECONOMIC AND SOCIAL DYNAMIC

Through this project, The SeaCleaners aims not only to help clean up the environment, but also to stimulate the local economy by creating jobs. We are working closely with local recycling companies and associations.

**In addition to deploying our Mobula, The SeaCleaners wants to encourage local waste recovery initiatives. These low-tech, accessible solutions generate local income and contribute to the emergence of a social economy based on solidarity.**





## 6. THE SEACLEANERS IN INDONESIA: FEEDBACK

### NATIONAL ACTION PLAN AGAINST MARINE PLASTIC WASTE



The Indonesian government has set itself an ambitious target: to reduce waste production by 30% and marine plastic pollution by 70% by 2025, as part of a National Action Plan to combat marine plastic waste. The Mobula 8 project is part of this plan, thanks to a memorandum of understanding signed in July 2022 with the Ministry of Maritime Affairs and Investment (Kemenko Marves).

### SCIENTIFIC ACTIVITIES



Extracting waste from the water goes hand in hand with data collection. In collaboration with Bali's Udayana University, the Mobula 8 operators count and classify floating waste into 8 families. Their geographical distribution is shown on an open data map, contributing to a better understanding of pollution in the region. Local researchers, supported by our International Scientific Committee, can work on characterising the macro-waste collected, on land and at sea, as well as sampling microplastics. The SeaCleaners also uses various ESRI tools, including QuickCapture and Survey123, and has developed a specific application to track the location and category of waste recovered by the Mobula 8.

### ACTION AT SEA AND AN EYE IN SPACE



The SeaCleaners has teamed up with CLS (Collecte Localisation Satellite, a subsidiary of CNES, the French National Centre for Space Studies), a world pioneer in Earth observation. CLS provides data on monitoring and modelling the drift of marine plastic waste in Indonesian waters and expertise in locating polluted marine areas in Indonesia.

### EDUCATION AND AWARENESS- RAISING ACTIVITIES



The clean-up campaigns carried out by Mobula 8 are also an opportunity to organise campaigns to raise awareness of plastic pollution. This strategy is combined with efforts to reduce plastic waste at source and as part of a wider movement towards a circular economy. To achieve this, The SeaCleaners' local and international partners and volunteers carry out educational activities, visit schools and organise clean-up days in the nearby areas where the boat operates.

Working with Indonesian stakeholders, our teams have developed educational tools and materials adapted to the local context to raise awareness of the importance of preserving the ocean, explain the harmful effects of plastic pollution and disseminate solutions for moving towards a more environmentally-friendly lifestyle.

### IMPROVING WASTE MANAGEMENT



From September 2022 to early 2024, The SeaCleaners supported local communities in the rural area of Amed to improve waste management with the local association Peduli Alam. The SeaCleaners has provided financial and technical support for projects already underway. In particular, we have equipped the area with new bins to ensure efficient collection, we have developed a sorting centre with the help of our sponsor Valorplast and we have also carried out awareness-raising campaigns.

The SeaCleaners also supported Gili Eco Trust, an association based on Gili Trawangan, specialising in the collection and treatment of waste on the island. This project had 3 main aims: to improve the existing sorting centre with our sponsor Valorplast, to improve the management of residual waste and to finance collection and awareness-raising tools.

# 7- LES PARTENAIRES DE THE SEACLEANERS EN INDONÉSIE



## Ministry of Maritime Sovereignty and Energy coordinating maritime affairs and investments of the Republic of Indonesia (Kemenko Marves).

Kemenkomarves is one of our most valuable supporters in Indonesia.



KEMENTERIAN KOORDINATOR BIDANG KEMARITIMAN DAN INVESTASI

[website](#)

## Rotary 3420

Our awareness-raising partners to help bring about lasting behavioural change in the fight against plastic pollution.



[website](#)

## Eyes on plastic

Our Mobulas are taking part in the ESA's "Eyes on Plastic" project to create a new tool based on Earth observation technologies, and to contribute to MDG 14.



[website](#)

## CLS (Collecte Localisation Satellite)

A major partner of The SeaCleaners, CLS has been a pioneer in Earth observation since 1986. Its vision is to imagine and deploy innovative solutions to understand and protect our planet and manage its resources sustainably.



[website](#)

## Alliance Française Bali French Institute

A natural partnership has been established with these two entities with the aim of promoting awareness and education in French and Indonesian.



Alliance Française  
Bali

[website](#)



Liberté  
Créativité  
Diversité

[website](#)

## CCI Indonesia

IFCCI brings together the French and Indonesian business communities with the aim of developing bilateral business contacts.



[website](#)

## French Embassy

Essential and invaluable support for The SeaCleaners.



[website](#)

## EFINOR Sea Cleaner

EFINOR Sea Cleaner is the builder of our Mobula 8, a shipyard and expert in multi-service clean-up vessels, EFINOR Sea Cleaner has an innovative patented technology. Mobula crews are trained jointly by EFINOR Sea Cleaner and The SeaCleaners.



[website](#)

## THE MOBULA - BOATS BORN OF A FRUITFUL ALLIANCE BETWEEN THE SEACLEANERS AND EFINOR SEA CLEANER

The Mobula 8 and 8.2 are complemented by the Mobula 10, designed to cope with heavier sea conditions and go from island to island collecting waste.

- **The Mobula 8** operates in calm, protected waters up to 6 miles off the coast, such as lakes, rivers, mangroves, etc.
- **The Mobula 10** is designed to operate in coastal waters up to 20 nautical miles from the coast, in rivers with strong currents, etc.



### INSPIRED BY THE EAGLE RAY

The Mobula range owes its name to the Mobula ray, also known as the eagle ray. These rays are very similar to manta rays, but differ in that their mouths are positioned on the underside of their bodies rather than at the front. The largest species is the Mediterranean Mobula mobular, which can reach a wingspan of 5 metres, weigh a tonne and perform spectacular leaps above the water. In the same way, the Mobula 8 and 10 resemble the MANTA\*, The SeaCleaners' emblematic clean-up boat. They share its objectives and mission of collecting plastic waste, but are smaller and more agile, able to operate in narrower, shallower areas.

\* see p.13 for more information on MANTA



Beyond their namesake, it was the desire to share their respective expertise that inspired the partnership between the two companies, with the aim of launching a programme to co-develop innovative solutions for collecting the plastic waste from which the Mobula boats are made.

EFINOR Sea Cleaner, based in Paimpol (Côtes d'Armor, Brittany), specialises in the design, manufacture and marketing of multi-service depollution vessels based on patented technology. EFINOR Sea Cleaner has 10 years of R&D under its belt and more than a hundred references in 30 countries in the field of multi-purpose clean-up vessels.

For its part, The SeaCleaners, a non-profit association under the French law of 1901, was set up in 2016 to combat plastic pollution. It develops innovative technological solutions for collecting and recycling floating plastic waste, including the emblematic MANTA project.

Through their partnership, EFINOR Sea Cleaner and The SeaCleaners are developing collection solutions to complement the MANTA, making it possible to operate in narrow, shallow areas where manoeuvrability is limited.



EFINOR



THE SEACLEANERS

## OTHER CONTRIBUTORS

Two leading French entities also contributed to the birth of the Mobula.

Technip Energies contributed its expertise during the design phase of the first Mobula and the integration of new pollution control solutions.

Technip Energies is a leader in engineering and technology for the energy transition, with leading positions in liquefied natural gas (LNG), hydrogen and ethylene, as well as growing market positions in blue and green hydrogen, sustainable chemistry and CO2 management. The company benefits from its robust project delivery model, supported by a broad offering of technologies, products and services.

The Institut de recherche pour le développement (IRD) was instrumental in securing the project's accreditation by the Pôle Mer Bretagne Atlantique.

The IRD is a multi-disciplinary French public research organisation and a key player on the international development agenda. Its model is original: an equitable partnership with developing countries. The IRD's research priorities are in line with the implementation of the Sustainable Development Goals (SDGs), with the aim of supporting development policies and the design of solutions adapted to the environmental, economic, social and cultural challenges facing mankind and the planet.

# NOTES AUX RÉDACTEURS

## À propos d'EFINOR Sea Cleaner

EFINOR Sea Cleaner est une filiale du groupe industriel EFINOR, fondé en 1988. Cette société propose des navires de nettoyage et de dépollution. Concepteur et fabricant, l'entreprise a développé une technologie unique, innovante et brevetée intégrée sur l'ensemble de ses navires. Elle permet le ramassage des déchets solides flottants et des déchets liquides de type hydrocarbures.

Les équipes travaillent en parallèle sur des projets de R&D à travers notamment la conception de prototypes de systèmes et de navires afin de répondre aux besoins spécifiques de la protection de l'environnement marin. Elles proposent ainsi des solutions alternatives en termes de propulsion plus respectueuse de l'environnement [*hybridation, 100 % électrique*] et ont également développé des prototypes pour répondre aux problématiques spécifiques des végétaux que sont les algues vertes et les sargasses.

<https://www.efinorseacleaner.com> ←

## About The SeaCleaners

The SeaCleaners is headquartered in La Trinité-sur-Mer in Brittany, western France, but its sponsorship, marketing and communications team is based in Paris.

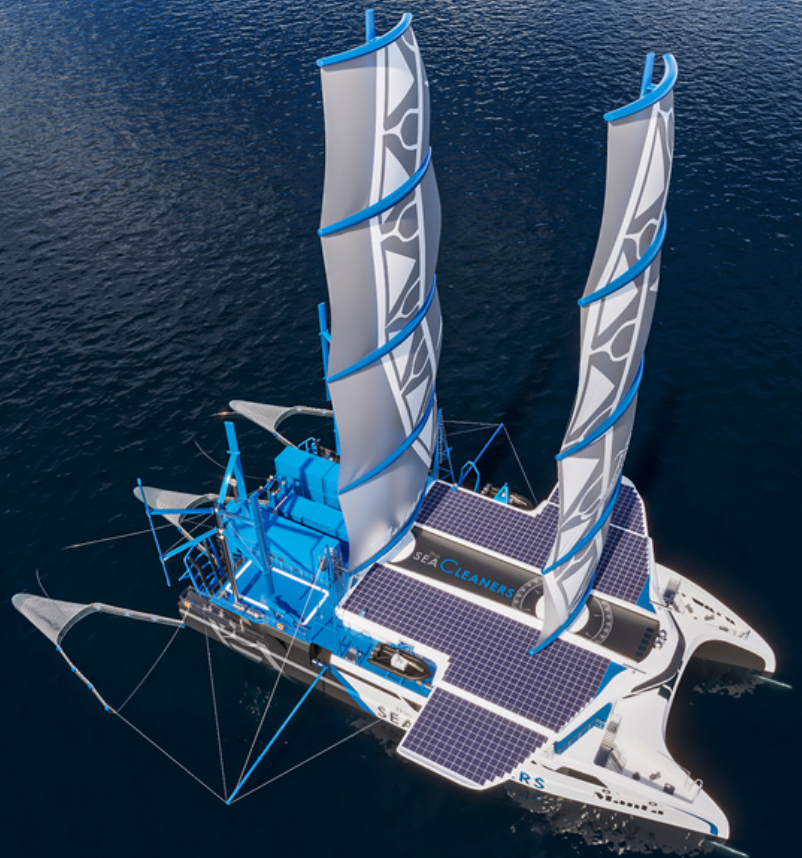
Founded in 2016, The SeaCleaners is a public-interest association offering concrete solutions to plastic pollution, both at sea and on land, through corrective and preventive missions.

An Observer Member of the IPCC, UN Environment, UN Climate and the Convention on Biological Diversity, supported by the Albert II of Monaco Foundation and a partner of the CCI France International network, The SeaCleaners has four missions:

- Protecting the environment by collecting floating waste and collecting waste on land with its teams of volunteers;
- Education and teaching, with the development of awareness-raising initiatives aimed at the populations affected, the general public and decision-makers;
- Scientific research;
- Promoting the transition to a circular economy..

[www.theseacleaners.org](http://www.theseacleaners.org) ←

**In particular, The SeaCleaners is developing a pioneering solution for collecting and recycling floating plastic macro-waste:** the MANTA, an innovative vessel equipped with an onboard plant, which will be launched in 2027. This giant of the seas will be the first ocean-going vessel capable of collecting and mass-processing floating ocean waste before it breaks up and has a lasting impact on marine ecosystems. A real technological challenge, MANTA will be powered by a combination of several renewable energy production technologies to minimise its carbon footprint.



## CONTACTS

### THE SEACLEANERS :

Elise D'EPENOUX

Responsable de la communication  
internationale & des affaires publiques

[e.depenoux@theseacleaners.org](mailto:e.depenoux@theseacleaners.org)

+33 (0)6 79 17 43 49

### EFINOR SEA CLEANER :

Céline AUGROS

Directrice communication groupe

[c.augros@efinor.com](mailto:c.augros@efinor.com)

Mobile : +33 (0)6 30 48 69 35

Tél. +33 (0)2 33 20 69 20



The  
**SEA CLEANERS**

[www.theseacleaners.org](http://www.theseacleaners.org)



**ÉFINOR**